

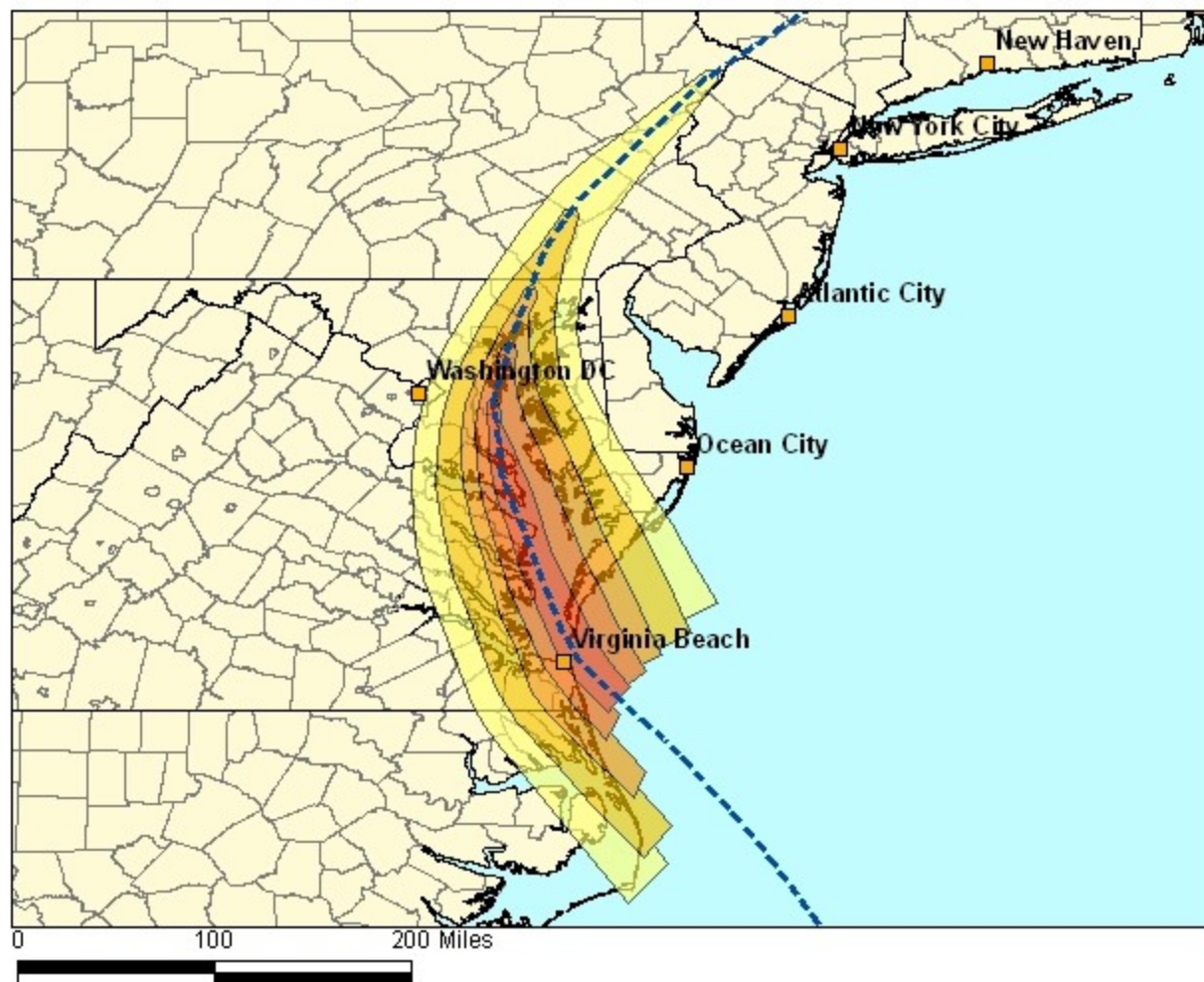


US Army Corps
of Engineers

Hurricane Kate Projected Damage Areas

Landfall Expected In About **24** Hours

**For Official
Use Only!**



Post Landfall Projected Damage Areas

This model is based on a
Category 4 storm making landfall
near Lancaster, VA.

Forecast Track

Historic Track

Projected Damage Areas

CAT 0-type damage

CAT 1-type damage

CAT 2-type damage

CAT 3-type damage

CAT 4-type damage

CAT 5-type damage

Information provided on this page displays a Category 4 storm making landfall near Lancaster, VA. These projections are based on information from the NHC (1600 EDT 04/27/2007) forecast.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Projected Damage Areas

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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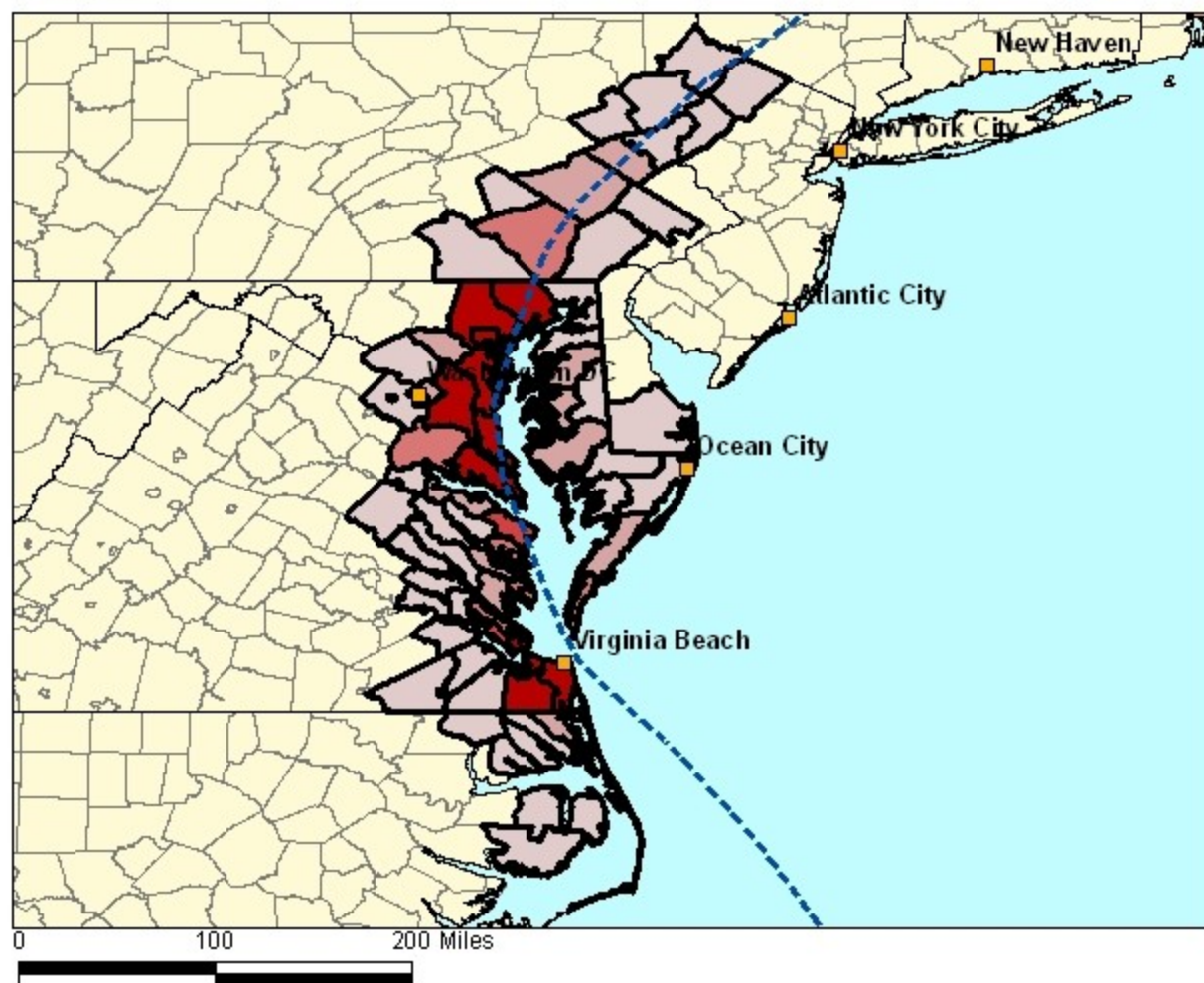


US Army Corps
of Engineers

Hurricane Kate Debris Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**



Post Landfall Debris Model Results

MD - 20,864,000 Yards
VA - 17,800,000 Yards
PA - 844,000 Yards
NC - 299,000 Yards
DC - 204,000 Yards
DE - 4,000 Yards
NJ - 2,000 Yards

*Model results per county on
following page*

This model is based on a
Category 4 storm making landfall
near Lancaster, VA.

Forecast Track

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 4 storm making landfall near Lancaster, VA. These projections are based on information from the NHC (1600 EDT 04/27/2007) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Debris Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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US Army Corps
of Engineers

Hurricane Kate Debris Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**

State	Yards per State	County	Yards per County
Delaware		Sussex	4,000
Delaware	4,000		
District of Columbia		Washington	204,000
District of Columbia	204,000		
Maryland		Anne Arundel	7,351,000
		Baltimore	2,775,000
		Baltimore City	1,761,000
		Calvert	2,829,000
		Caroline	13,000
		Cecil	52,000
		Charles	257,000
		Dorchester	235,000
		Harford	1,270,000
		Howard	166,000
		Kent	25,000
		Montgomery	73,000
		Prince Georges	1,126,000
		Queen Annes	164,000
		Somerset	83,000
		St Marys	2,449,000
		Talbot	162,000
		Wicomico	56,000
		Worcester	17,000
Maryland	20,864,000		
New Jersey		Sussex	< 1,000
		Warren	2,000
New Jersey	2,000		
North Carolina		Camden	23,000

State	Yards per State	County	Yards per County
North Carolina		Currituck	121,000
(continued)		Dare	99,000
		Gates	3,000
		Hyde	< 1,000
		Pasquotank	47,000
		Perquimans	4,000
		Tyrrell	2,000
North Carolina	299,000		
Pennsylvania		Berks	199,000
		Carbon	2,000
		Chester	49,000
		Lancaster	268,000
		Lebanon	< 1,000
		Lehigh	159,000
		Monroe	43,000
		Montgomery	14,000
		Northampton	84,000
		Pike	7,000
		York	19,000
Pennsylvania	844,000		
Virginia		Accomack	198,000
		Alexandria	35,000
		Arlington	8,000
		Caroline	< 1,000
		Charles City	< 1,000
		Chesapeake	1,270,000
		Essex	23,000
		Fairfax	31,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Debris Model

Generated By:
Siemens, LRL 1630 EDT 04/27/2007

Sources:
HURREVAC
LRL-DEBRIS

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US Army Corps
of Engineers

Hurricane Kate Debris Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**

State	Yards per State	County	Yards per County
Virginia		Gloucester	215,000
(continued)		Hampton City	1,061,000
		Isle Of Wight	37,000
		James City	78,000
		King And Queen	16,000
		King George	6,000
		King William	11,000
		Lancaster	326,000
		Mathews	267,000
		Middlesex	176,000
		New Kent	7,000
		Newport News	511,000
		Norfolk City	2,205,000
		Northampton	366,000
		Northumberland	507,000
		Poquoson City	91,000
		Portsmouth	428,000
		Richmond	55,000
		Southampton	< 1,000
		Suffolk City	82,000
		Surry	4,000
		Virginia Beach	9,345,000
		Westmoreland	105,000
		Williamsburg	25,000
		York	311,000
Virginia	17,800,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds.

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Hurricane Kate Debris Model

Generated By:
Siemens, LRL 1630 EDT 04/27/2007

Sources:
HURREVAC
LRL-DEBRIS

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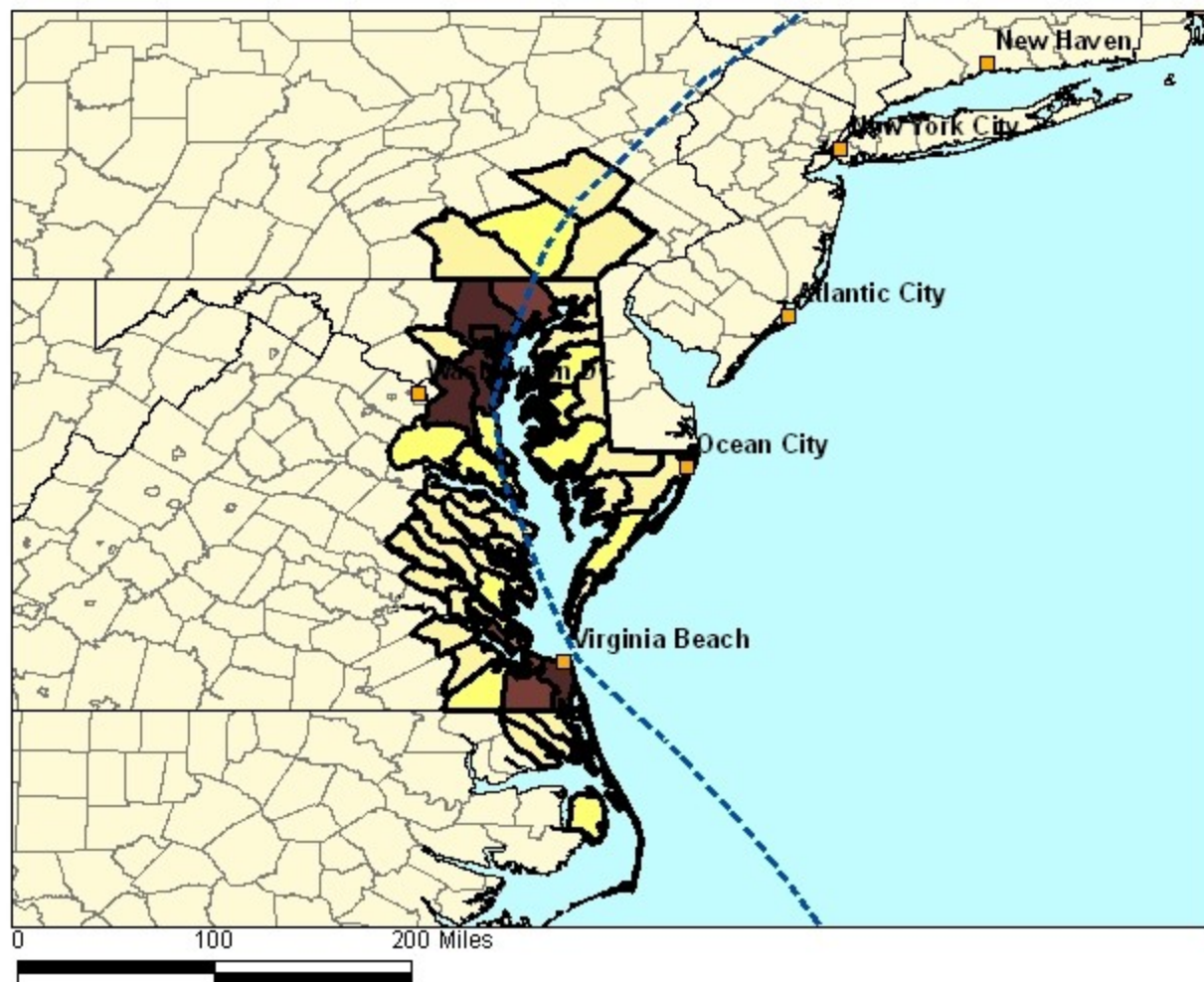


US Army Corps
of Engineers

Hurricane Kate Population Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**



Post Landfall Population Model Results

Maryland - 2,455,000

Virginia - 1,638,000

Pennsylvania - 96,000

North Carolina - 78,000

*Model results per county on
following page*

This model is based on a
Category 4 storm making landfall
near Lancaster, VA.

Forecast Track

Historic Track

Population

< 25,000 persons

25,000 - 99,999 persons

100,000 - 174,999 persons

175,000 - 249,999 persons

> 250,000 persons

Information provided on this page displays a Category 4 storm making landfall near Lancaster, VA. These projections are based on information from the NHC (1600 EDT 04/27/2007) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2005 values).

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Population Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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US Army Corps
of Engineers

Hurricane Kate Population Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**

State	Population per State	County	Population per County
Maryland		Anne Arundel	498,000
		Baltimore	436,000
		Baltimore City	576,000
		Calvert	88,000
		Caroline	3,000
		Cecil	16,000
		Charles	81,000
		Dorchester	27,000
		Harford	229,000
		Howard	10,000
		Kent	9,000
		Prince Georges	289,000
		Queen Annes	31,000
		Somerset	20,000
		St Marys	97,000
		Talbot	35,000
		Wicomico	5,000
		Worcester	5,000
Maryland	2,455,000		
North Carolina		Camden	9,000
		Currituck	24,000
		Dare	30,000
		Pasquotank	15,000
North Carolina	78,000		
Pennsylvania		Berks	4,000
		Chester	2,000
		Lancaster	85,000
		York	5,000
Pennsylvania	96,000		

State	Population per State	County	Population per County
Virginia		Accomack	32,000
		Chesapeake	219,000
		Essex	7,000
		Gloucester	38,000
		Hampton City	146,000
		Isle Of Wight	14,000
		James City	23,000
		King And Queen	5,000
		King William	4,000
		Lancaster	12,000
		Mathews	10,000
		Middlesex	11,000
		New Kent	< 1,000
		Newport News	180,000
		Norfolk City	232,000
		Northampton	14,000
		Northumberland	13,000
		Poquoson City	12,000
		Portsmouth	101,000
		Richmond	10,000
		Suffolk City	30,000
		Surry	< 1,000
		Virginia Beach	439,000
		Westmoreland	12,000
		Williamsburg	12,000
		York	62,000
Virginia	1,638,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2005 values.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Population Model

Generated By:
Siemsen, LRL 1630 EDT 04/27/2007

Sources:
HURREVAC
LRL-DEBRIS

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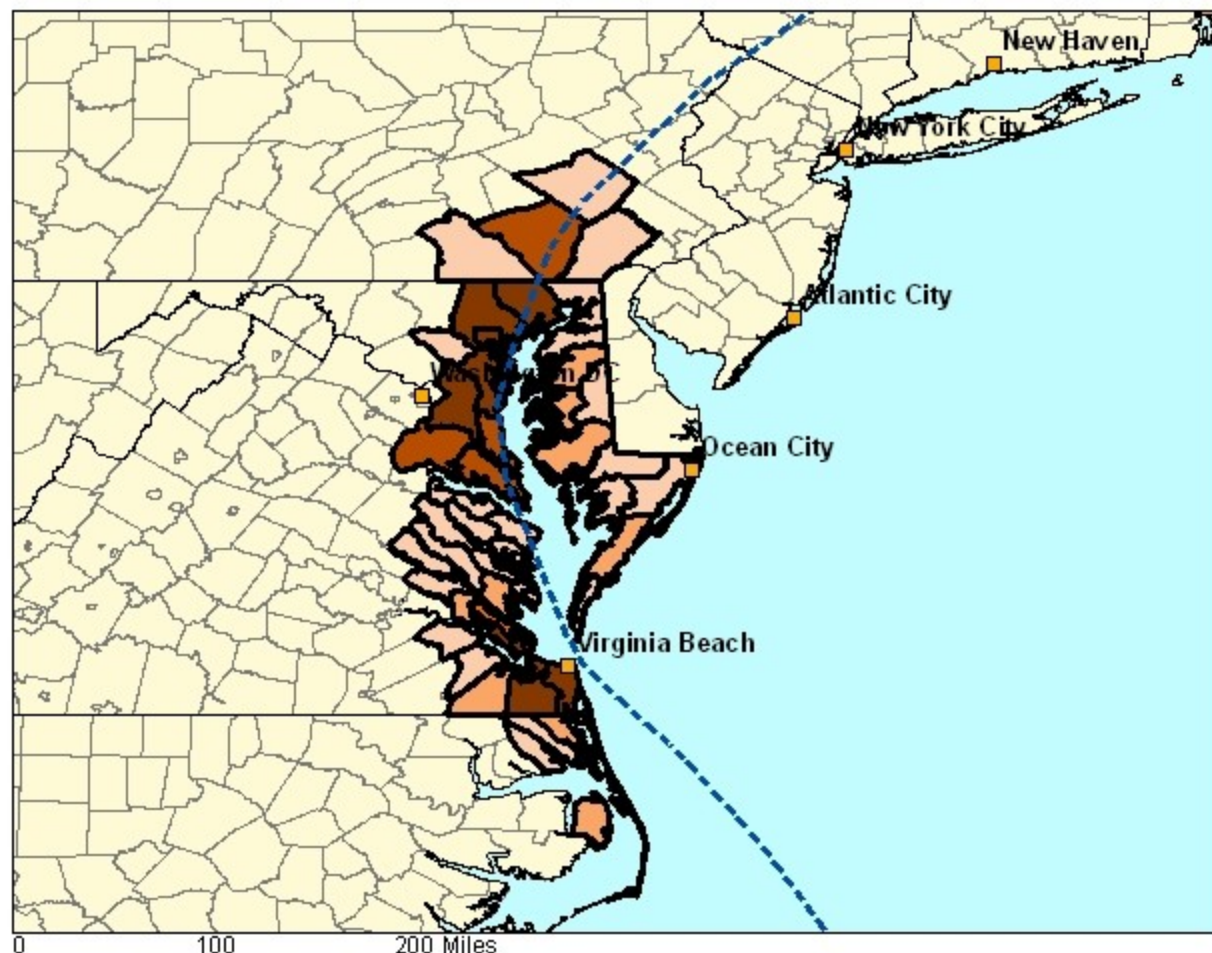


US Army Corps
of Engineers

Hurricane Kate Households Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**



Post Landfall Households Model Results

Maryland - 924,000
Virginia - 614,000
Pennsylvania - 32,000
North Carolina - 32,000

*Model results per county on
following page*

This model is based on a
Category 4 storm making landfall
near Lancaster, VA.

Forecast Track

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50,000 households

Information provided on this page displays a Category 4 storm making landfall near Lancaster, VA. These projections are based on information from the NHC (1600 EDT 04/27/2007) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2005 values).

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Hurricane Kate Households Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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US Army Corps
of Engineers

Hurricane Kate Households Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**

State	Households per State	County	Households per County
Maryland		Anne Arundel	182,000
		Baltimore	174,000
		Baltimore City	228,000
		Calvert	30,000
		Caroline	< 1,000
		Cecil	6,000
		Charles	28,000
		Dorchester	11,000
		Harford	84,000
		Howard	4,000
		Kent	4,000
		Prince Georges	100,000
		Queen Annes	12,000
		Somerset	7,000
		St Marys	35,000
		Talbot	15,000
		Wicomico	2,000
		Worcester	2,000
Maryland	924,000		
North Carolina		Camden	4,000
		Currituck	9,000
		Dare	13,000
		Pasquotank	6,000
North Carolina	32,000		
Pennsylvania		Berks	2,000
		Chester	< 1,000
		Lancaster	28,000
		York	2,000
Pennsylvania	32,000		

State	Households per State	County	Households per County
Virginia		Accomack	13,000
		Chesapeake	77,000
		Essex	3,000
		Gloucester	15,000
		Hampton City	54,000
		Isle Of Wight	6,000
		James City	9,000
		King And Queen	2,000
		King William	2,000
		Lancaster	6,000
		Mathews	4,000
		Middlesex	5,000
		New Kent	< 1,000
		Newport News	70,000
		Norfolk City	86,000
		Northampton	6,000
		Northumberland	6,000
		Poquoson City	5,000
		Portsmouth	39,000
		Richmond	4,000
		Suffolk City	11,000
		Surry	< 1,000
		Virginia Beach	160,000
		Westmoreland	5,000
		Williamsburg	4,000
		York	22,000
Virginia	614,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2005 values.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Households Model

Generated By:
Siemsen, LRL 1630 EDT 04/27/2007

Sources:
HURREVAC
LRL-DEBRIS

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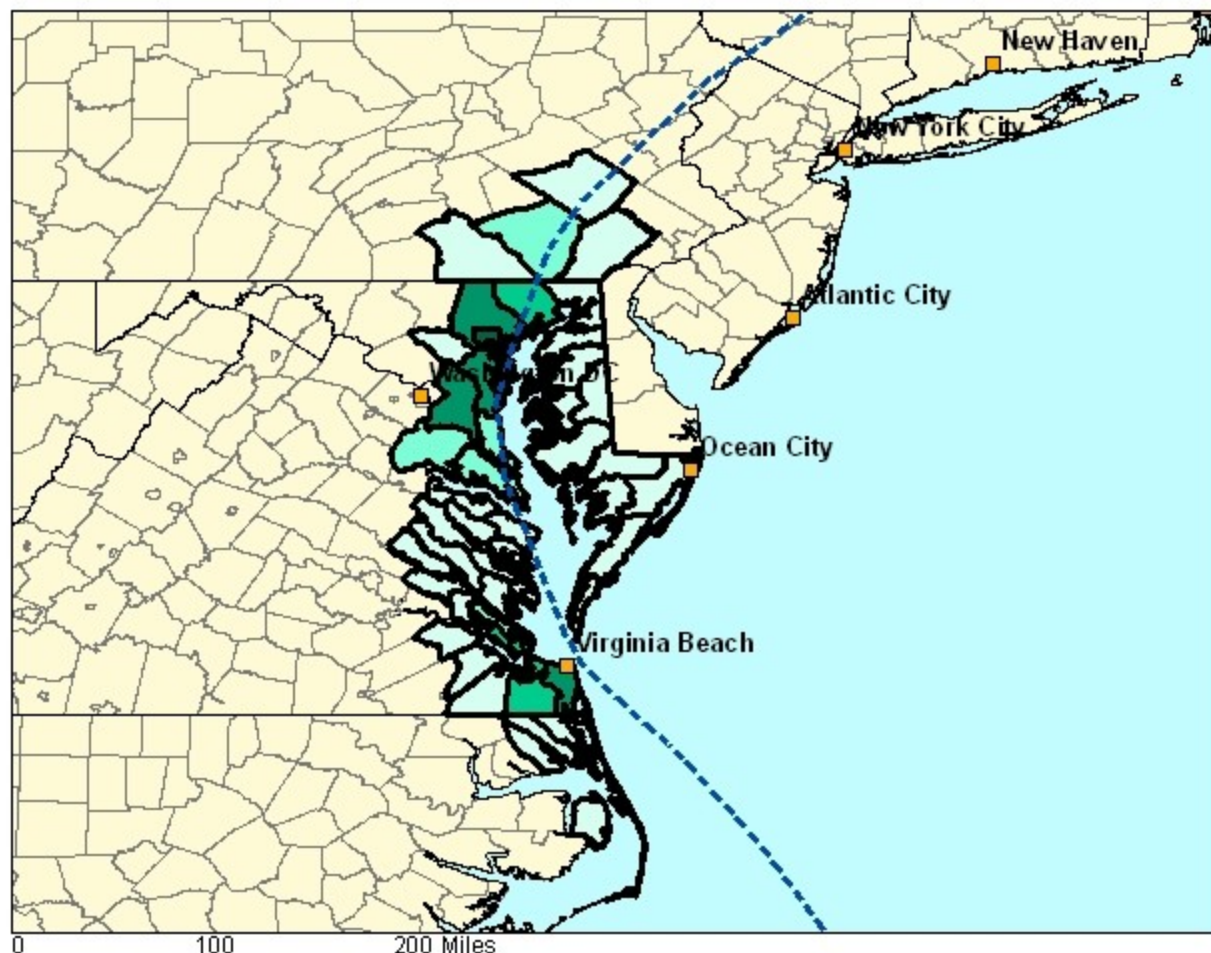


US Army Corps
of Engineers

Hurricane Kate Commodities Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**



Post Landfall Ice/Water Model Results

Day One / Day Two / Day Three
 MD - 52/103/206 Truckloads Each
 VA - 36/72/144 Truckloads Each
 PA - 3/5/10 Truckloads Each
 NC - 2/4/8 Truckloads Each

*Model results per county on
following page*

This model is based on a
Category 4 storm making landfall
near Lancaster, VA.

Forecast Track

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 4 storm making landfall near Lancaster, VA. These projections are based on information from the NHC (1600 EDT 04/27/2007) forecast. The amount of commodities forecasted is based on Mission Guide Book requirements (8 pounds of ice per person per day) and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at <https://enlink.usace.army.mil>

or contact ENLink at 1-877-936-4546

Hurricane Kate Commodities Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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US Army Corps
of Engineers

Hurricane Kate Commodities Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**

State	Truckloads per State	County	Truckloads per County
Maryland		Anne Arundel	40
		Baltimore	35
		Baltimore City	47
		Calvert	8
		Caroline	1
		Cecil	2
		Charles	7
		Dorchester	3
		Harford	19
		Howard	1
		Kent	1
		Prince Georges	24
		Queen Annes	3
		Somerset	2
		St Marys	8
		Talbot	3
		Wicomico	1
		Worcester	1
Maryland	206		
North Carolina		Camden	1
		Cumtuck	2
		Dare	3
		Pasquotank	2
North Carolina	8		
Pennsylvania		Berks	1
		Chester	1
		Lancaster	7
		York	1
Pennsylvania	10		

State	Truckloads per State	County	Truckloads per County
Virginia		Accomack	3
		Chesapeake	18
		Essex	1
		Gloucester	4
		Hampton City	12
		Isle Of Wight	2
		James City	2
		King And Queen	1
		King William	1
		Lancaster	1
		Mathews	1
		Middlesex	1
		New Kent	1
		Newport News	15
		Norfolk City	19
		Northampton	2
		Northumberland	2
		Poquoson City	1
		Portsmouth	9
		Richmond	1
		Suffolk City	3
		Surry	1
		Virginia Beach	36
		Westmoreland	1
		Williamsburg	1
		York	5
Virginia	144		

The amount of commodities forecasted is based on Mission Guide Book requirements (8 pounds of ice per person per day) and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system. The assumption in this scenario is that 40% of the resident population affected by the hurricane will have power outage in this area and cause a need for ice and water.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Commodities Model

Generated By:
Siemsen, LRL 1630 EDT 04/27/2007

Sources:
HURREVAC
LRL-DEBRIS

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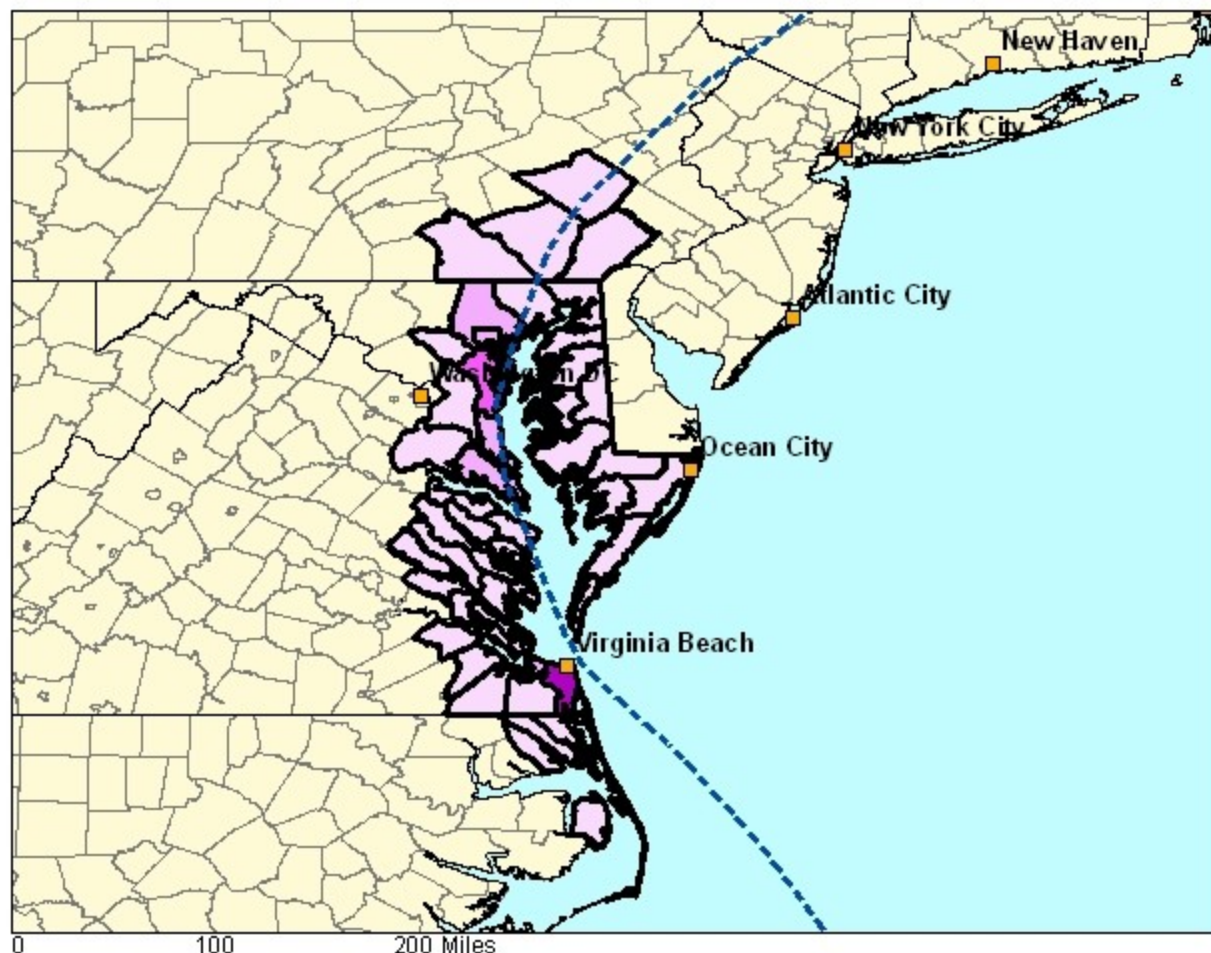


US Army Corps
of Engineers

Hurricane Kate Temporary Housing Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**



Post Landfall Temporary Housing Model Results

Maryland - 20,700
Virginia - 18,300
North Carolina - 400
Pennsylvania - 300

*Model results per county on
following page*

This model is based on a
Category 4 storm making landfall
near Lancaster, VA.

Forecast Track

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 4 storm making landfall near Lancaster, VA. These projections are based on information from the NHC (1600 EDT 04/27/2007) forecast. Temporary housing is based on 1% in CAT 1, 3% in CAT 2, 5% in CAT 3 and 9% in CAT 4.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Housing Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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US Army Corps
of Engineers

Hurricane Kate Temporary Housing Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**

State	per State	County	per County
Maryland	20,700	Anne Arundel	5,900
		Baltimore	3,300
		Baltimore City	2,400
		Calvert	2,400
		Caroline	< 100
		Cecil	< 100
		Charles	400
		Dorchester	300
		Harford	1,800
		Howard	< 100
		Kent	< 100
		Prince Georges	1,200
		Queen Annes	300
		Somerset	200
		St Marys	2,200
		Talbot	300
		Wicomico	< 100
		Worcester	< 100
North Carolina	400	Camden	< 100
		Currituck	200
		Dare	200
		Pasquotank	< 100
Pennsylvania	300	Berks	< 100
		Chester	< 100
		Lancaster	300
		York	< 100

State	per State	County	per County
Virginia	18,300	Accomack	300
		Chesapeake	1,800
		Essex	< 100
		Gloucester	300
		Hampton City	1,400
		Isle Of Wight	< 100
		James City	< 100
		King And Queen	< 100
		King William	< 100
		Lancaster	300
		Mathews	300
		Middlesex	200
		New Kent	< 100
		Newport News	700
		Norfolk City	2,700
		Northampton	400
		Northumberland	500
		Poquoson City	200
		Portsmouth	600
		Richmond	< 100
		Suffolk City	200
		Surry	< 100
		Virginia Beach	7,700
		Westmoreland	200
		Williamsburg	< 100
		York	500

THIS IS AN EXPERIMENTAL MODEL!!

Temporary housing is based on 1% in CAT 1, 3% in CAT 2, 5% in CAT 3 and 9% in CAT 4.

Details about this model may be obtained at <https://enqlink.usace.army.mil>
or contact ENQLink at 1-877-936-4546

Hurricane Kate Housing Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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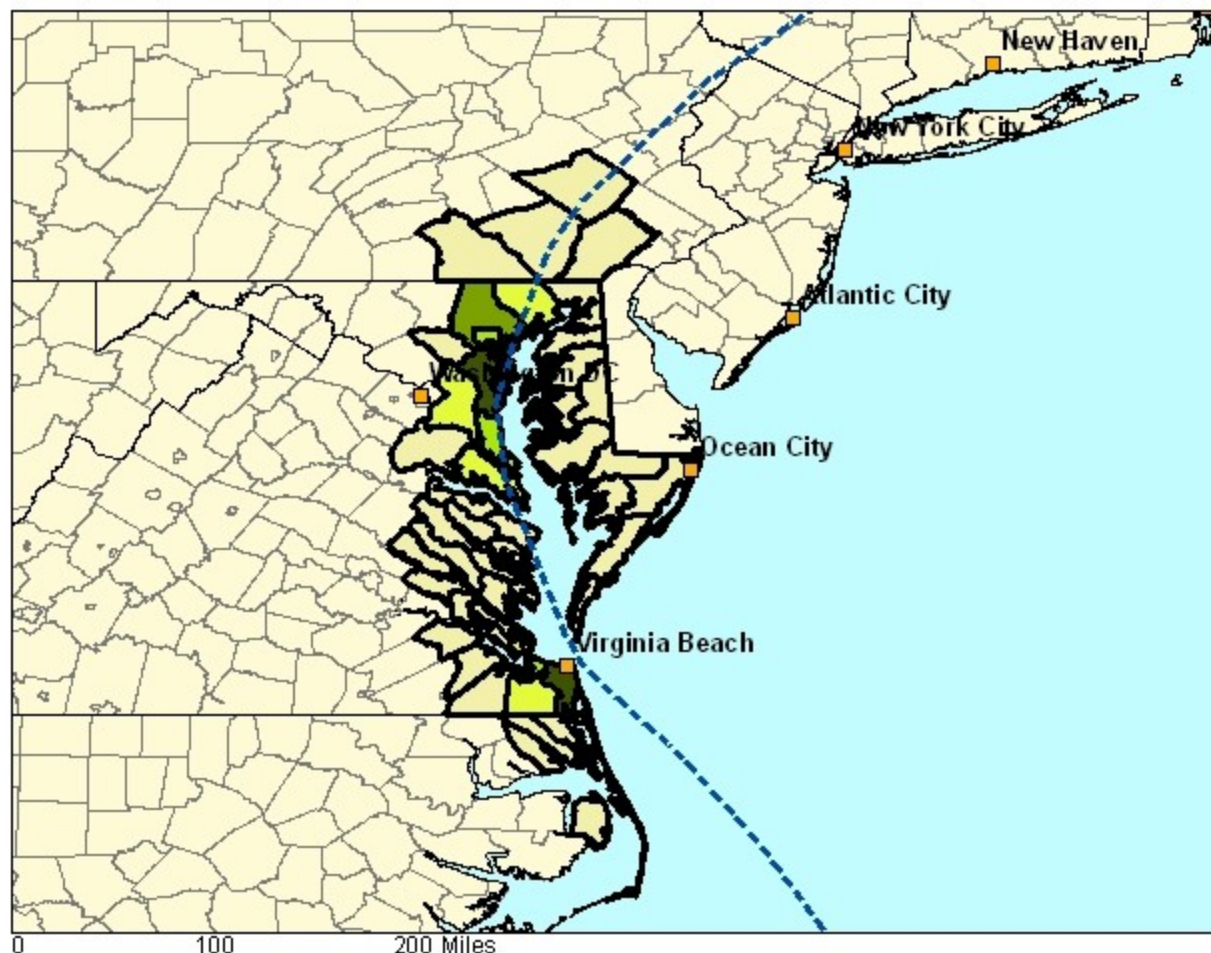


US Army Corps
of Engineers

Hurricane Kate Temporary Roofing Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**



Post Landfall Temporary Roofing Model Results

Maryland - 39,600
Virginia - 35,700
North Carolina - 900
Pennsylvania - 600

*Model results per county on
following page*

This model is based on a
Category 4 storm making landfall
near Lancaster, VA.

Forecast Track

Historic Track

Temporary Roofing

< 2,000 units
 2,000 - 3,999 units
 4,000 - 5,999 units
 6,000 - 9,999 units
 > 10,000 units

Information provided on this page displays a Category 4 storm making landfall near Lancaster, VA. These projections are based on information from the NHC (1600 EDT 04/27/2007) forecast. Temporary roofing is based on 2% in CAT 1, 6% in CAT 2, 10% in CAT 3 and 15% in CAT 4.

Details about this model may be obtained at <https://englink.usace.army.mil>
or contact ENGLink at 1-877-936-4546

Hurricane Kate Roofing Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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US Army Corps
of Engineers

Hurricane Kate Temporary Roofing Model

Landfall Expected In About **24** Hours

**For Official
Use Only!**

State	House Units per State	County	House Units per County
Maryland	39,600	Anne Arundel	11,600
		Baltimore	6,600
		Baltimore City	4,700
		Calvert	4,100
		Caroline	< 100
		Cecil	200
		Charles	700
		Dorchester	600
		Harford	3,500
		Howard	< 100
		Kent	< 100
		Prince Georges	2,300
		Queen Annes	600
		Somerset	300
		St Marys	3,900
		Talbot	500
		Wicomico	< 100
		Worcester	< 100
North Carolina		Camden	< 100
		Currituck	400
		Dare	300
		Pasquotank	200
North Carolina	900		
Pennsylvania	600	Berks	< 100
		Chester	< 100
		Lancaster	600
		York	< 100
Pennsylvania			

State	House Units per State	County	House Units per County
Virginia	35,700	Accomack	600
		Chesapeake	3,600
		Essex	< 100
		Gloucester	600
		Hampton City	2,700
		Isle Of Wight	200
		James City	200
		King And Queen	< 100
		King William	< 100
		Lancaster	600
		Mathews	500
		Middlesex	400
		New Kent	< 100
		Newport News	1,400
		Norfolk City	5,300
		Northampton	700
		Northumberland	800
		Poquoson City	300
		Portsmouth	1,200
		Richmond	200
		Suffolk City	300
		Surry	< 100
		Virginia Beach	14,900
		Westmoreland	300
		Williamsburg	< 100
		York	900
Virginia			

THIS IS AN EXPERIMENTAL MODEL!!

Temporary roofing is based on 2% in CAT 1, 6% in CAT 2, 10% in CAT 3 and 15% in CAT 4.

Details about this model may be obtained at <https://enlink.usace.army.mil>
or contact ENLink at 1-877-936-4546

Hurricane Kate Roofing Model

Generated By:

Siemsen, LRL 1630 EDT 04/27/2007

Sources:

HURREVAC
LRL-DEBRIS

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